

REMARKS

Reconsideration of this application courteously is solicited. By this paper, claims 4 and 10 have been canceled. The remaining claims 1-3, 5-9, 11, and 12 have been amended.

Initially, the Examiner's indication of allowable subject matter in original claims 6, 7, and 10 has been appreciated. In response to this indication of allowable subject matter, claim 9 has been amended to independent form incorporating the subject matter of claim 10 therein. Hence, immediate allowance of claim 9 together with its remaining dependent claims 11 and 12 is solicited.

Claims 1-5, 8, and 9 have been rejected under 35 U.S.C. § 102(e) as purportedly anticipated by U. S. Patent Publication 2004/0013144 to Kise et al. (hereinafter Kise). This rejection is traversed.

Claim 1 has been amended to more clearly distinguish from Kise. As amended, claim 1 now defines the Fabry-Perot modes as having a first gain spectrum, and the Bragg grating mode as having a second gain spectrum. Thereafter, in describing the reflectivity of the light-emitting surface, claim 1 defines such reflectivity as having a minimum at a wavelength where the gain spectrum of the Fabry-Perot modes (the first gain spectrum) reaches a maximum, at temperatures where the maximum of the Fabry-Perot mode gain spectrum exceeds that of the maximum of the Bragg grating mode gain spectrum.

In so amending claim 1, subject matter from original claim 4 has been incorporated therein, and accordingly, claim 4 has been canceled. However, as part of the consideration of these amendments to claim 1, reference also should be made back to original claim 4. It was not until recently that the Applicant noted an error in original claim 4. Claim 4 incorrectly interchanged the described relationship between the Bragg grating mode and the Fabry-Perot modes with respect to the previously recited "predetermined temperature." Correction has been made in claim 1. In this regard, see, for instance, paragraph [0037] on page 7 of Applicant's specification.

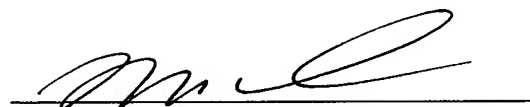
As so amended, claim 1 positively recites that the minimum reflectivity of the light-emitting surface (with its anti-reflective film) is at a wavelength where the gain of the Fabry-Perot modes is maximum at temperatures where the gain of such modes is larger than that of the Bragg mode. Applicant respectfully submits that Kise simply does not teach or suggest this specific limitation in claim 1. Applicant submits that, to those of ordinary skill in the art, Kise simply does not teach or suggest whether the 1% reflectivity value is or is not a minimum for any particular wavelength. Further, with respect to the temperature aspect of Applicant's requirements, Applicant submits that Kise disclosure simply does not mention operating temperature for the device, and temperature dependence of the LD characteristics. On the other hand, Applicant has recognized that at temperatures where the gain of the Fabry-Perot modes exceeds that of the Bragg mode, the Fabry-Perot modes become dominant in the oscillation spectrum of Applicant's semiconductor laser. Accordingly, Applicant also recognizes that selection of the material of the anti-reflective film (AR film) is important, as is selection of the thickness of such film. By so selecting the material of the AR film and adjusting its thickness, the reflectivity of the film can be made a minimum at a wavelength where the gain of the Fabry-Perot modes becomes a maximum. Applicant courteously submits that Kise does not teach or suggest Applicant's requirements for the reflectivity of the light-emitting surface as now described in claim 1.

For at least these reasons, the rejection based upon Kise is overcome. Withdrawal of the rejection earnestly is solicited.

In view of the foregoing amendments and Remarks, it courteously is urged that all of the claims are allowable, and that this application is in condition for allowance. Favorable action in this regard is requested. If an extension of time under 37 C.F.R. § 1.136 is necessary that is not accounted for in the papers filed herewith, such an extension is requested. The extension fee should be charged to Deposit Account No. 02-4300; Order No. 033035 M 134.

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Dated: February 24, 2006